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003/009

Application No.: 09/735,607

Docket No.: 4481-037

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of measuring the efficiency of data transmission in a network in which data packets have sequence numbers and sending stations retransmit packets which are deemed to be lost, comprising the steps of:

monitoring the occurrence of packets at a point in the network;

tracking the sequence numbers of packets successively monitored at the point;

detecting occurrence of a sequence number less than a next expected sequence number as being indicative of occurrence of packet retransmission;

incrementing a retransmission count in accordance with the quantity of retransmitted data; and

reporting the retransmission count as indicative of the transmission efficiency; and
deriving a measure of total volume of packets transmitted as a function of the retransmission count.

2. (Original) The method of claim 1, wherein the network uses TCP.

3. (Previously presented) The method of claim 2, wherein TCP traffic in the network at the monitored point is coherent TCP traffic which traverses the monitored point in the order of packet transmission.

4. (Previously presented) The method of claim 1, further including selecting at least one specific connection for monitoring by reference to at least one of (a) an IP address of a connection end-point, (b) a port at an end-point, and (c) a protocol.

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5. (Currently amended) The method of claim 1, further including attributing detecting occurrence of a sequence number greater than the next expected number to as being indicative of loss of a packet, incrementing a loss count by the size of a lost TCP payload, and determining the location of a fault relative to the location of the monitoring point by using the loss count.

6. (Previously presented) The method of claim 5, further including determining the location of the fault by comparing counts obtained from different monitoring points.

7. (Cancelled).

8. (Currently amended) A method of monitoring data transmission in a network in which data packets have sequence numbers and sending stations retransmit packets which are deemed to be lost, comprising the steps of:

monitoring the occurrence of packets at a point in the network;
tracking the sequence numbers of packets successively monitored at the point;
detecting occurrence of a sequence number greater than a next expected sequence number as being indicative of occurrence of packet loss at the point;
incrementing a loss count in accordance with the quantity of lost data at the point; and
reporting the loss count as indicative of the transmission quality; and
deriving a measure of total volume of packets transmitted as a function of the loss count.

9. (Previously presented) The method of claim 8, wherein at least one specific connection is selected for monitoring by reference to at least one of (a) an IP address of a connection end-point, (b) a port at an end-point, and (c) a protocol.

10. (Currently amended) The method of claim [[1]] 8, further including determining the location of a fault relative to the location of the monitoring point by using the loss count.

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11. (Previously presented) The method of claim 10, further including determining the location of the fault by comparing counts obtained from different monitoring points of the network.

12. (Cancelled)

13. (Currently amended) Apparatus for measuring the efficiency of data transmission in a network in which data packets have sequence numbers and sending stations retransmit packets which are deemed to be lost, comprising a processor arrangement arranged to:

- monitor the occurrence of packets at a point in the network;
- track the sequence numbers of packets successively monitored at the point;
- detect occurrence of a sequence number less than a next expected sequence number as being indicative of occurrence of packet retransmission;
- increment a retransmission count in accordance with the quantity of retransmitted data; and
- report the retransmission count as indicative of the transmission efficiency; and
- derive a measure of total volume of packets transmitted as a function of the retransmission count.

14. (Currently amended) The apparatus of claim 13, wherein the processor arrangement is arranged to attributedetect occurrence of a sequence number greater than the next expected number ~~to~~ as being indicative of loss of a packet, increment a loss count by the size of a lost TCP payload, and determine the location of a fault relative to the location of the monitoring point by using the loss count.

15. (Previously presented) The apparatus of claim 14, wherein the processor arrangement is arranged to determine the location of the fault by comparing counts obtained from different monitoring points of the network.

16. (Cancelled)

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17. (Previously presented) The apparatus of claim 13, further including a monitor for the packets adapted to be coupled to the point.

18. (Currently amended) Apparatus for measuring the efficiency of data transmission in a network in which data packets have sequence numbers and sending stations retransmit packets which are deemed to be lost, comprising a processor arrangement arranged to:

monitor the occurrence of packets at a point in the network;
track the sequence numbers of packets successively monitored at the point;
detect occurrence of a sequence number greater than a next expected sequence number as being indicative of occurrence of packet loss at the point;
increment a loss count in accordance with the quantity of lost data; and
report the loss count as indicative of the transmission quality; and
derive a measure of total volume of packets transmitted as a function of the loss count.

19. (Currently amended) The apparatus of claim 18, wherein the processor arrangement is arranged to:

(a) attribute detect occurrence of a sequence number greater than the next expected number to as being indicative of loss of a packet,
(b) increment a loss count by the size of a lost TCP payload, and
(c) determine the location of a fault relative to the location of the monitoring point by using the loss count.

20. (Previously presented) The apparatus of claim 19, wherein the processor arrangement is arranged to determine the location of the fault by comparing counts obtained from different monitoring points.

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21. (Previously presented) The apparatus of claim 18, further including a monitor for the packets adapted to be coupled to the point.